BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Improvements of roads and drains balance main and cross roads of Chikkabommasandra ward no:04

Sl No	Description of work	Unit	No	Length m	Breadth m	Depth m	Quantity	Rate in Rs	Amount in Rs
1	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33)								
	For Drain Desilt	Sqm							
	Chikkabommasandra								
	1st main		2	200.00	0.90		360.00		
	2nd main		2	400.00	0.90		720.00		
	Temple Front		2	36.00	0.90		64.80		
							1144.80		
	Deduct for missing/damaged						286.20		
							858.60	111.30	**95562.18**
	Basic Rate Rs.=	105.00							
	Add 6% A.W Rs. =	6.30							
	Total Rate Rs. =	**111.30**							
2	KSRRB 300 - Excavation for road, drains and similar works KSRRB 300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 (P.No-143, I.No-19.1)								
		Cum							
	For Drain Desilt								
	Chikkabommasandra								
	1st main		2	200.00	0.60	0.40	96.00		
	2nd main		2	400.00	0.60	0.35	168.00		
	Temple Front		2	36.00	0.60	0.40	17.28		
							281.28	215.28	**60553.96**
	Basic Rate Rs.=	130.00							
	Add 6% A.W Rs. =	7.80							
	Sub Total =	137.80							
	8Km Lead, Loading and Unloading =(2*1.28*8)+57	77.48							
	Total Rate Rs. =	**215.28**							
3	Providing and fixing RCC precast cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	For drain cover slab	Sqm							
	missing/damaged from item no.01								
							286.20		
							286.20	2337.00	**668849.40**
4	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)								
	For Asphalt Road	Cum							
	Chikkabommasandra Bad Reaches								
	1st main		1	244.00	1.00	0.15	36.60		
	2nd main		1	400.00	1.00	0.15	60.00		
	Temple Front		1	36.00	1.00	0.15	5.40		

Sl No	Description of work	Unit	No	Length m	Breadth m	Depth m	Quantity	Rate in Rs	Amount in Rs
							102.00	1994.92	**203481.84**
	Basic Rate Rs.=	1882.00							
	Add 6% A.W Rs. =	112.92							
	Total Rate Rs. =	**1994.92**							
5	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	For Asphalt Road	Cum							
	Chikkabommasandra Bad Reaches								
	1st main		1	244.00	1.00	0.200	48.80		
	2nd main		1	400.00	1.00	0.200	80.00		
	Temple Front		1	36.00	1.00	0.200	7.20		
							136.00	2001.28	**272174.08**
	Basic Rate Rs.=	1888.00							
	Add 6% A.W Rs. =	113.28							
	Total Rate Rs. =	**2001.28**							
6	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)								
	For Asphalt Road	Sqm							
	Chikkabommasandra Bad Reaches								
	1st main		1	244.00	1.00		244.00		
	2nd main		1	400.00	1.00		400.00		
	Temple Front		1	36.00	1.00		36.00		
							680.00	28.62	**19461.60**
	Basic Rate Rs.=	27.00							
	Add 6% A.W Rs. =	1.62							
	Total Rate Rs. =	**28.62**							
7	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6)								
	For Asphalt Road	Cum							
	Chikkabommasandra Bad Reaches								
	1st main		1	244.00	1.00	0.05	12.20		
	2nd main		1	400.00	1.00	0.05	20.00		
	Temple Front		1	36.00	1.00	0.05	1.80		
							34.00	6597.44	**224312.96**
	Basic Rate Rs.=	6224.00							
	Add 6% A.W Rs. =	373.44							
	Total Rate Rs. =	**6597.44**							
8	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)								
	For Asphalt Road	Sqm							

Sl No	Description of work	Unit	No	Length m	Breadth m	Depth m	Quantity	Rate in Rs	Amount in Rs
	Chikkabommasandra								
	1st main								
	2nd main		1	244.00	5.60		1366.40		
	Temple Front		1	400.00	6.00		2400.00		
			1	36.00	12.00		432.00		
	Basic Rate Rs.=	12.00					**4198.40**	12.72	**53403.65**
	Add 6% A.W Rs. =	0.72							
	Total Rate Rs. =	**12.72**							
9	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)(P.No-171,I No-21.78.12)								
	For Asphalt Road	Cum							
	Chikkabommasandra								
	1st main								
	2nd main		1	244.00	5.60	0.03	40.99		
	Temple Front		1	400.00	6.00	0.03	72.00		
			1	36.00	12.00	0.03	12.96		
	Basic Rate Rs.=	7315.00					**125.95**	7753.90	**976619.21**
	Add 6% A.W Rs. =	438.90							
	Total Rate Rs. =	**7753.90**							
10	KSRRB M800-13 Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	For Asphalt Road	Sqm							
	Chikkabommasandra								
	1st main								
	2nd main		2	244.00	0.10		48.80		
	Temple Front		2	400.00	0.10		80.00		
			2.5	36.00	0.10		9.00		
	Basic Rate Rs.=	429.00					**137.80**	454.74	**62663.17**
	Add 6% A.W Rs. =	25.74							
	Total Rate Rs. =	**454.74**							
11	KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer.(P.No-187,I No-24.41)								
	For Asphalt Road	Nos							
	Chikkabommasandra								
	1st main		2	14.00			28.00		
	2nd main		2	44.00			88.00		

Sl No	Description of work	Unit	No	Length m	Breadth m	Depth m	Quantity	Rate in Rs	Amount in Rs
							116.00	357.22	41437.52
	Basic Rate Rs.=	337.00							
	Add 6% A.W Rs. =	20.22							
	Total Rate Rs. =	**357.22**							
							Sub Total 1 Rs.		2678519.57
	Add GST @ 12%								321422.35
							Sub Total 2 Rs.		2999941.92
	Miscellaneous & Rounding off								58.08
								Total Rs.	3000000.00

CERTIFICATE:

1 The work spot has been inspected by me and the work is found to be necessary.
2 The estimate is prepared as per PW, P&IWTD S.R Bangalore circle for the year 2018-2019.
3 The Provisions made in the estimate are quite necessary and adequate.
4 The area comes with in the BBMP limits.

Assistant Engineer	Assistant Executive Engineer	Executive Engineer
Ward 04	Yelahanka New Town Sub Division	Yelahanka Division
BBMP	BBMP	BBMP

Administrative Approval

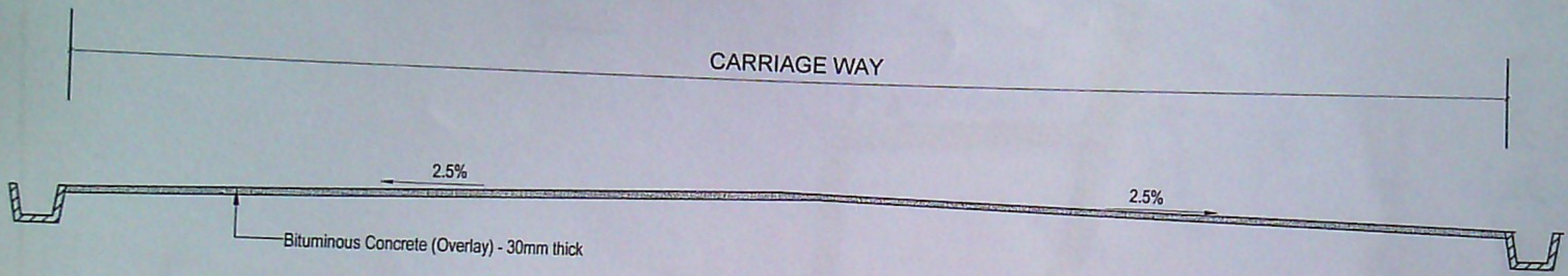
Accorded For AS 30:00 lakhs only
Head of A/C...P3726....
CER NO :..210..... Dt:..27.03.2020

JA CE (YNK).

Technical Sanction

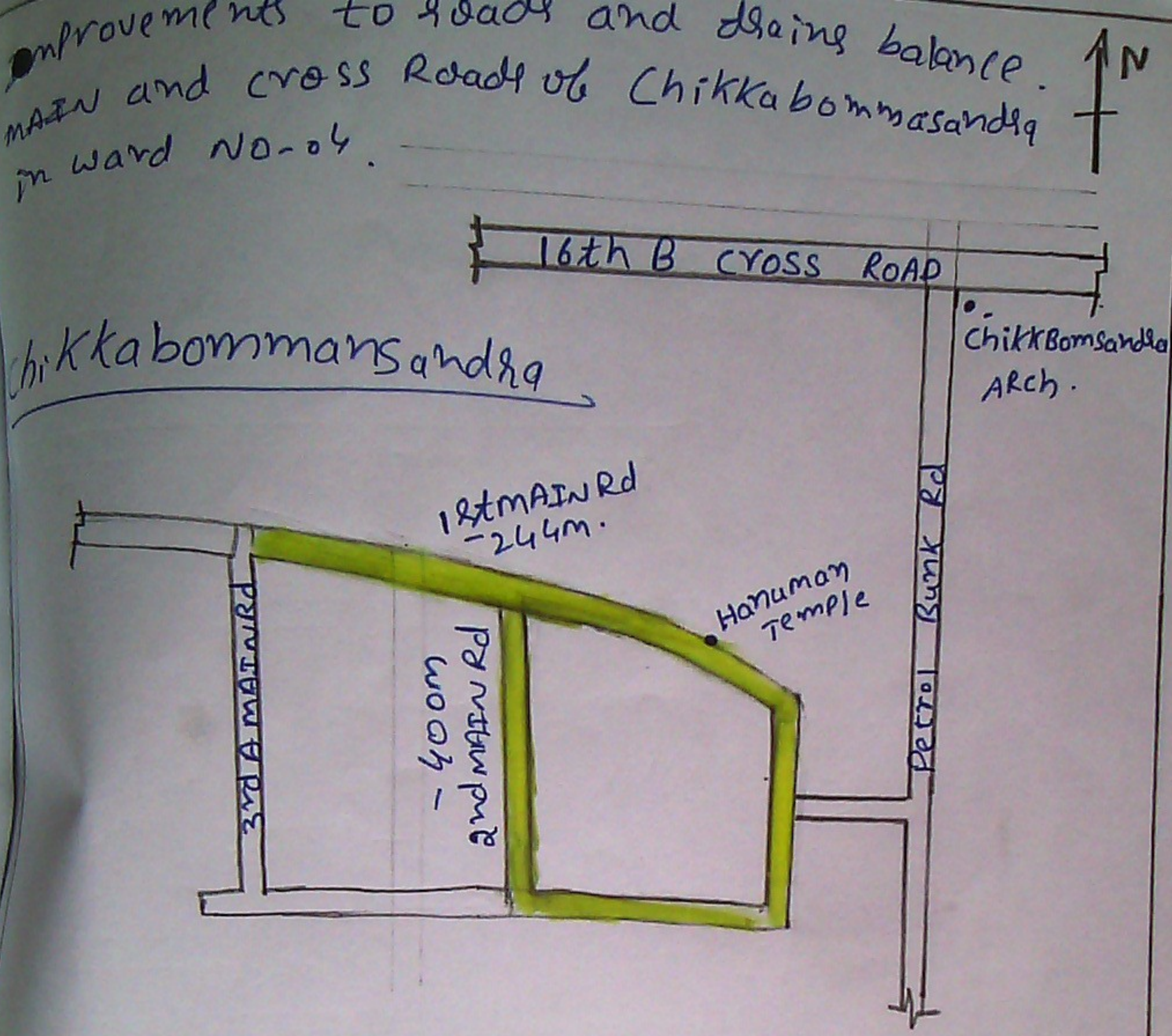
Accorded For AS 30:00 lakhs only
Head of A/C...P3726....
CER NO :..354..... Dt:..27.03.2020

JA CE (YNK)



Proposed typical Cross section of Asphalt Road Overlay

Improvements to Roads and Drains balance. MAIN and cross Roads of Chikkabommasandra in ward NO-04.



Ramya Research

Town

— ASPHALT ROAD